

December 13, 1952

Dr. Joan Taylor
Salmonella Reference Laboratory
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Colindale Avenue
London NW 9, England

Dear Dr. Taylor:

Dr. Bruce Stocker has mentioned your interest in our serotype-recombination studies in Salmonella, not only during his very pleasurable visit here last summer. I have recently sent him a number of stocks in which you may be interested and which I am sure he will hasten to make available to you. I enclose a brief listing of these stocks. A reprint of the publication referred to will be sent shortly; I should be indebted for a regular exchange.

I should imagine that some of the monophasic stocks listed might be useful as antigens for diagnostic sera, especially the i, c and r reagents. I assume that monophasic stocks are already available for most of the other specific phases. If there are any combinations that would be of special practical interest, and can be engendered from the B-D groups, please let me know. A good deal of this work so far has been done with monophasic stocks, for technical as well as theoretical reasons, but similar results are coming from studies with diphasics. In these transductions, one phase is exchanged at a time, and it appears that there are two genetic loci corresponding to the usual two homology groups. Edwards' #157 strain appears to be anomalous in that it carries a serologically typical 1,2.-- phase whose genetic homologies are, however, with the specific phases of other stocks, thus permitting the construction of such monstrosities as SW-938. As this arise uniquely from a java strain, and has not recurred, the simplest interpretation is that this anomalous 1,2-- is a new mutation of the b factor, and does not correspond to the usual B;1,2 diphasic variation at all.

So far, we are still confined to the B/D groups for transduction experiments. Dr. Spicer (who sends you best wishes for the season) is looking at the possibility of somatic antiserum transductions-- the chief limitation here is the consumption of enormous volumes of serum.

Yours sincerely,

Joshua Lederberg
Associate Professor of Genetics

P. S. I am rather worried by SW-674 (gp:1,2) as a diphasic combination which presumably does not occur naturally, although it is genetically possible (and perhaps likely in view of the ecological relationship of typhimurium and enteritidis-dublin types). As it happens, I have not studied this strain closely myself, but Edwards mentioned that the second phase reacts both with 1,2 and gp, and it may be overlooked in natural isolations for this reason. Would you comment on whether the routine diagnostic examination given g.-types in your laboratory would be likely to have picked up serotypes similar to SW-674?

JL